ENVIRONMENTAL MITIGATION AND MONITORING REPORT (EMMR)

PROJECT/ACTIVITY DATA

Project/Activity Name:	USAID Regional Trade and Market Alliances (RTMA) Project
Geographic Location(s) (Country/Region):	Central America: El Salvador, Guatemala, Honduras, Nicaragua
Implementation Start/End Date:	21 April 2013 – 21 April 2018
Contract/Award Number:	AID-596-C-13-00001
Implementing Partner(s):	Nathan Associates Inc.
Tracking ID:	
Tracking ID/link of Related EMMP:	
Tracking ID/link of Related IEE:	LAC-IEE-06-05 and Amendments: LAC-IEE-08-68, IEE LAC10-90
Tracking ID/link of Other, Related Analyses:	

ORGANIZATIONAL/ADMINISTRATIVE DATA

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	USAID| El Salvador
Lead BEO Bureau:	Economic Growth Office
Prepared by:	Zuleima Zhang, M&E Specialist
Revised by:	Rodrigo Rivas, COP
Date Prepared:	March 2018
Submitted by:	Rodrigo Rivas, COP
Date Submitted:	March 31, 2018

ENVIRONMENTAL COMPLIANCE REVIEW DATA

Analysis Type:	EMMR
Additional Analyses/Reporting Required:	SUAP

PURPOSE

Environmental Mitigation and Monitoring Report (EMMRs) are required for USAID-funded projects when the 22CFR216 documentation governing the project impose conditions on at least one project/activity component. EMMRs ensure that the ADS 204 requirements for reporting on environmental compliance are met. EMMRs are used to report on the status of mitigation and monitoring efforts in accordance with IEE requirements over the preceding project implementation period.

SCOPE

The following EMMR documents the mitigation measures implemented as detailed in the project EMMP, challenges encountered, and corrective actions taken. It describes the status of each required mitigation measure as stipulated in the EMMP and provides an update on progress regarding the implementation and monitoring of the EMMP.

This EMMR includes the following:

1. Narrative description of the EMMP implementation and monitoring system, any updates to the system, any staff or beneficiary trainings conducted on environmental compliance, lessons learned, and other environmental compliance reporting details.
2. EMMR table summarizing the status of mitigation measures, any outstanding issues relating to required conditions, and general remarks.
3. Photos of mitigation measures and activities, or other related attachments.

USAID REVIEW OF EMMR

Approval:	Lorena Aceto, Activity Manager/A/COR	Date
Clearance:	_____, Mission Environmental Officer	Date
Clearance:	_____, Regional Environmental Advisor	Date
Concurrence:	_____, Bureau Environmental Officer	Date

1.0 PROJECT/ACTIVITY SUMMARY

USAID Regional Trade and Market Alliances Project works to establish regional consolidated value chains and improve market access for critical food products through more solid market alliances and greater trade facilitation, harmonization, and institutional capacity.

The project's activities focus on two major components:

1. Development of critical agricultural value chains, linking small and medium-sized producers with regional and export markets, and the consolidation of intra-regional value chains to take advantage of underused trade opportunities and new market niches.

2. Improvement of trade facilitation through the harmonization of customs processes, trade administration, border management, transportation, logistics and other trade-related mechanisms to improve capacity at the regional institutional and private sector level.

2.0 RTMA'S ENVIRONMENTAL MONITORING AND MITIGATION PLAN

In April 2017, the USAID Regional Trade and Market Alliances Project presented the environmental monitoring and mitigation plan to the USAID mission in El Salvador to identify the baseline and potential environmental impact of the activities implemented under components I - Value Chains - and II - Trade Facilitation - and to propose mitigation actions to avoid or reduce environmental impacts in the intervention zones.

The EMMP covers three broad categories:

- Environmental monitoring related to the procurement and installation of machinery and minor equipment to optimize the production process of 33 agro-enterprises in four countries in the region; Component 1.
- Environmental monitoring of companies using pesticides in the post-production stage; Component 1.
- Environmental monitoring of projects requiring small-scale construction; Component 11.

The results and main challenges of implementing mitigation measures have been reported to USAID in the project's quarterly reports. The objective of this document is to present a consolidated report of the main achievements, challenges and recommendations derived from the environmental management of the project.

3.0 MONITORING AND REPORTING FOR ENVIRONMENTAL COMPLIANCE

BASELINE

- **Grant Program Beneficiaries - Production Process**

As part of the process of selecting beneficiaries, in 2014, RTMA conducted a preliminary identification of the potential environmental impacts of implementing technical assistance to each cooperative (see example in section 5.1).

Subsequently, the project carried out an inspection of the facilities, processes and environment of the beneficiary organizations; and conducted surveys and interviews with stakeholders to identify the main areas of intervention to improve the environmental performance of these organizations, which are mentioned below[1]:

Industrial safety: about 9 organizations showed a lack of interest in issues related to industrial safety and/or occupational health. Failure to adopt adequate protocols in this area may result in accidents, worsening of working conditions for employees, and impairment of food safety.

Use of water and other natural resources: In 8 organizations was identified some conflict or weakness in the use of water for product washing activities; in addition, 2 organizations reported the use of wood (sawdust) for the operation of drying ovens.

Waste Disposal and protection of the facilities: The lack of a waste disposal policy was evident in some organizations, as well as inadequate protection from external factors, which can encourage the proliferation of rodents, and affect the image of the organization.

RTMA's environmental specialists did not identify high-risk impacts such as contamination of water sources, deforestation, deterioration of ecosystems, or impacts on neighboring communities.

- **Use of pesticides in the post-harvest phase by the cooperative ACOPASCA**

The Asociación Cooperativa San Carlos de R.L. (ACOPASCA) was one of the beneficiaries of the Grants program. In addition to assistance to strengthen the technical and administrative capacities of the organization, RTMA financed the purchase of a fumigation chamber to automate the banana preservation process.

In October 2017, USAID approved RTMA's amendment to the Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP) for the Better Coffee Harvest project to provide a framework of good practices for post-harvest handling, and use and disposal of pesticides. The two pesticides used by the Association were categorized with a slight degree of toxicity, and their registration with the U.S. Environmental Protection Agency and the Ministry of Agriculture and Livestock of El Salvador was confirmed. The PERSUAP amendment concludes that the pesticides can be used by Acopasca subject to compliance of certain conditions.

- **Small-scale infrastructure**

[1] Hallazgos del levantamiento de la línea base realizada por los especialistas del Componente 1 y los especialistas ambientales del subcontratista del proyecto, SUN Mountain International LLC. Mayo 2017. Ver referencia en sección 5.2.

As part of the interventions to improve international trade processes at the borders, the project undertook a series of initiatives to modernize customs operations, improve the working conditions of border control officials, logistics, and road management at the El Amatillo and La Hachadura primary zones in El Salvador. With the support of technical experts, RTMA's Monitoring and Evaluation Specialist, and counterpart observers, the project identified a set of potential risks in the design, construction, and closure phases of small-scale infrastructure works; which included operating without proper environmental permits, insufficient soil stability in construction areas, damage to existing infrastructure, exposure to electrical grids, occupational accidents, etc.

IMPLEMENTATION OF ENVIRONMENTAL MITIGATION AND MONITORING ACTIVITIES

The risks identified during the baseline survey were documented in Tables I and II of the EMMP. Based on this information, the necessary measures to mitigate negative environmental impacts were defined and documented in the Table III. This provided RTMA the guidelines to conduct monitoring and evaluation of the corrective/preventive measures implemented during 2017 and 2018. The tables in section 4 present the status of implementation of these activities. A summary of the main achievements and challenges is presented below:

- **Production process of the beneficiaries of the Grants program**

Industrial safety:

An important factor of the technical assistance provided by RTMA under Component I was the implementation of a knowledge transfer model that linked research centers (local technical partners), umbrella institutions and producers together to cooperate on designing production processes and supervising the installation and operation production steps, as well as the marketing of selected products.

As part of this model, institutions such as Fusades, Agexport, Apen, Catie, Funder, and Zamorano, along with experts from Component 1, provided training to bean, potato, tomato, vegetable, onion and banana producer organizations on the importance of incorporating food safety, good manufacturing practices and industrial safety to access regional markets.



FIGURE 1. WORKSHOPS ON GOOD MANUFACTURING PRACTICES 2015-2016.

Along with the delivery of machinery and minor equipment, the project provided the organizations with personal protective equipment and signage to improve working conditions and properly delimit the risk areas of each production plant.

FIGURE 2. FROM LEFT TO RIGHT: ASOPRANO, ARSAGRO

The project also produced an industrial safety guide for each cooperative, which provides a series of recommendations, prohibitions, standards and contingency plans to mitigate or appropriately address a risk situation in the cooperative. (See Figure 3.)

FIGURE 3. INDUSTRIAL SAFETY GUIDELINES, SOURCE: RTMA

Project intervention results:

- Nearly 30 producer organizations received training in good manufacturing practices and industrial safety for the first time.
- 12 organizations[2] received approximately $5,400 in personal protective equipment, hand washers, lockers and plant signage from the project.
- The generation of market alliances with relevant customers in the region has generated a reciprocal relationship that encourages compliance with good manufacturing practices.
- The organizations received a safety manual adapted for each type of operation to provide guidance for strengthening the implementation of industrial safety plans.
- The machinery has significantly improved the labor conditions of employees in the producer companies.

[2] COOPERATIVA RAFAELEÑA, ADECHIC, ASADIT, TUICHANENSES, ATESCATEL, ASOPRANO, ASOCUCH, COMECSA, ASOAGRA, ARSAGRO, ALDEA GLOBAL, ACOPASCA

Challenges

- Many organizations with management accustomed to manual processes have the erroneous belief that the use of personal protective equipment makes it difficult to carry out the operations at the plant efficiently, and consider it as an additional cost that does not represent a tangible benefit for the cooperative. Tackling such cultural barriers has been a constant challenge for the project. The demand for safety compliance as a requirement for receiving equipment, in addition to market pressure, has led these organizations to gradually and autonomously implement good manufacturing practices.
- During monitoring visits, it was found that most organizations provide an induction to industrial safety for new employees; however, they lack a continuous training program to reinforce the use of personal protective equipment, occupational health and industrial safety.
- Heads of the production plants must establish more strict controls to ensure compliance of industrial security standards.

Use of water and other natural resources:

The machinery donated by the Project for the potato, carrot and onion processing lines require a water supply for the washing stages of the process. Although the machinery has meant a more efficient use of water per unit produced, the growth in production volume has represented a greater consumption of water for these organizations.

The operation of this machinery has not resulted in contamination of water sources, however, the project's environmental specialists provided recommendations to the organizations to improve water use. Among the recommendations are the construction of rainwater harvesting systems, the measurement of water consumption by production cycle, installation and/or modifications to the capacity of absorption pits, and reuse of wastewater.

FIGURE 4. FROM LEFT TO RIGHT COMECSA'S WELL, ECARAI POTATOES WASHING MACHINE

During the last monitoring visit in the first quarter of 2018, the Project confirmed the implementation of some of these recommendations by a few organizations. For instance, La Meseta has built reservoirs for rainwater storage. This system has allowed them to keep the production level stable even in the dry season. The Association also reuses the sewage water for irrigation in the surrounding crops. Comecsa is completely dependent on the rainwater captured, as they do not have their own irrigation system. Ecarai, also a potato producer, is interested in implementing a rainwater harvesting system in the medium to long term.

The companies visited have drainage systems with sediment control, which allows the filtered water to be used in crops; the soil is returned to the crops.

The only potential conflict over water use was identified in Acopasca, however this company obtained a letter of certification from the national water company stating that the operation of the plant does not affect the availability of water to the community.

Project intervention results:

- Prior to the project's intervention, the products (carrots and potatoes) were washed by hand directly in water sources or in places not suitable for food handling such as carwashes. The incorporation of automatic washing machinery has eliminated direct contact with community water sources and has helped maintain the safety of the products.
- As part of the sanitary and environmental certification process, the authorities of each country are monitoring the organizations; this includes the use of water and its quality.

Challenges

- Organizations do not have the means to regularly measure water consumption. RTMA suggested they make an estimation based on the total capacity of the well and number of times the well must be filled per day. However, the project verified that the organizations have not consistently kept a log of water consumption.
- As the production of these companies continues to grow, they will need to expand the capacity of the sludge traps to filter sediment.

Waste Disposal:

During the first visit to the organizations' facilities, opportunities for improvement were identified for the storage and disposal of waste and by-products from the production processes, including the definition of specific sites in the plant to store and separate recyclable and biodegradable waste, and to properly fence the plant to prevent rodent or bird invasions.

Some organizations have gradually incorporated clearer policies for waste disposal, which allows them to be better prepared for the following production cycles. Comecsa uses the by-product of the process to fertilize the crops; ECARAI disposes the waste in the municipal landfill and uses the by-products to feed the animals of the nearby farms; La Meseta also uses the by-product (pieces of carrot) for animal feed; and Arsagro uses the waste for composting and worm farming.

Meseta and Arsagro have incorporated the recommendations of the project, making an adequate fence around the facilities and installing rodent traps. (See Figure 5.)

FIGURE 5. FROM LEFT TO RIGHT STATUS OF THE PLANT IN APRIL 2017 –ARSAGRO AND LA MESETA-, FENCES IMPLEMENTED AND VERIFIED IN MARCH 2018

Challenges

The other cooperatives have yet to implement a systematized disposal method and alternative ways of using waste.

- **Use of pesticides in the post-harvest phase by the cooperative ACOPASCA**

ACOPASCA's General Manager (GM) has designated responsibility to the Packing Plant Manager for enacting the recommended environmental mitigation measures and keeping the organization compliant with the regional PERSUAP and other environmental regulations and commitments. ACOPASCA made significant progress on the implementation of environmental commitments.

The Project worked with FUSADES, the Local Technical Partner in El Salvador, to develop a training plan on practices for safer use of pesticides and general good health and safety practices. As of December 2017, 33 Acopasca's personnel were trained.

Trainings included information about the level of toxicity of pesticides according to labeling and EPA's classification, use of industrial safety equipment, consequences of incorrectly using pesticides, and first aid in case of intoxication. The General Manager has made the use of protective equipment and clothing (e.g. gloves, safety glasses, overalls) mandatory for staff working in harvest and post-harvest activities in the cooperative. However, the GM's authority does not extend to employee behavior on private land. Some employees continue to use pesticides on their own private plots without using protective equipment or clothing.

FIGURE 6. TRAININGS CONDUCTED BY FUSADES SPECIALIST

Furthermore, ACOPASCA has acquired additional informational material from the Ministry of Agriculture as well as related authorities on the safe use of pesticides (see Figure 7) and have purchased a copy of El Salvador's Official Register of Approved Pesticides for their employees.

FIGURE 7. INFORMATIVE MATERIAL ON SAFER USE OF PESTICIDES

The ACOPASCA procurement coordinator is expected to consult these materials throughout the purchasing process. The cooperative is also being regularly audited by its main clients in order to prevent use of prohibited pesticides.

In December 2017, Acopasca started to use the fumigation chamber under a pilot project with Chiquita Brands. Fusades provided technical support to Acopasca during the first week of its use to ensure proper use of pesticides. The only products used are those required by Chiquita (Azoxystrobin, Tiabendazol and Aluminum Sulfate), and approved in the PERSUAP.

One of the recommendations included in the PERSUAP was to relocate the pesticide-mixing tank since it was located in an area of high employee traffic where anyone could access the tank. The tank has been relocated behind the plant, where the ventilation is better and access is restricted. Acopasca has already installed appropriate signage in the facilities. (See Figure 8.)



FIGURE 8. MIXURE TANK RELOCATED

ACOPASCA has also obtained a non-affection letter from the local government for the use of the well in the community. This letter is essentially an official statement that the local government does not consider there to be a conflict in the use of water for community and production plant activities. Acopasca also received approval from Fomilenio II to build its own well to be used exclusively for production activities.

FUSADES was asked to conduct a water quality test to identify whether the wastewater at the ACOPASCA site is suitable for reuse in other activities (mainly crop irrigation). The results were favorable for Acopasca since the treated water can be used for irrigation activities.

To date, the only outstanding task is to conduct a capacity analysis for the sludge trap.

Project intervention results:

- 33 personnel trained on safer use of pesticides.
- Delivered $1,840 USD in Personal Protection Equipment.
- Improved labor conditions of the employees.
- Implemented industrial security protocol.
- Consolidated the market alliance with Chiquita brands.
- Encouraged cooperatives to pursuit certification on Global GAP/GMP.

Challenges

- Enforcing the use of protection equipment when applying pesticides in domestic crops.
- Ensuring consistent implementation of mitigation measures in the event of a change in management of the cooperative.
- Some people do not know how to read so it is necessary to adapt trainings and material to facilitate understanding of the PERSUAP implications.

SUSTAINABILITY OF THE ENVIRONMENTAL PERFORMANCE OF ORGANIZATIONS

The scheme of interaction between local technical partners - producers - customers implemented by the project has led to the consolidation of a model that ensures the sustainability of mitigation measures and the environmental performance of the organizations, as shown in Figure 9.

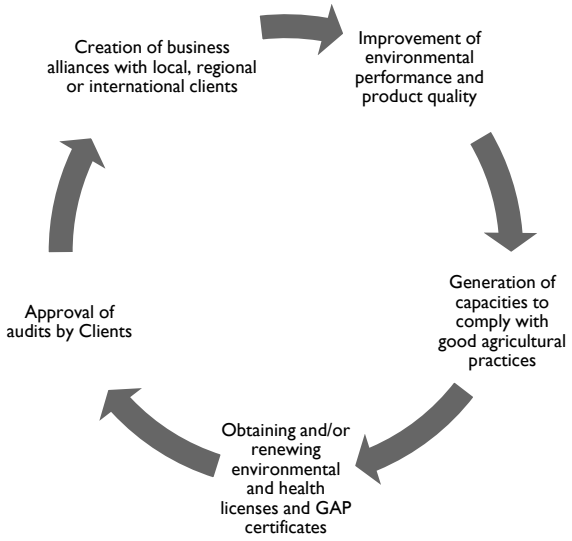


FIGURE 9. CYCLE OF COMPLIANCE WITH GOOD ENVIRONMENTAL PRACTICES

The continuation of the relationship between local technical partners and the organizations has been critical. As an example, the role of the Agrocommercial Consortium of Honduras is highlighted, which is currently working with SENASA and Funder to define a one-year work plan to obtain local certification of its 8 members[3] in good manufacturing and agricultural practices. This certification will be the first step to achieve the certification in Global GAP, which is required by the Group Intur (owner of the Burger King Franchise in Honduras), to generate a new business alliance.

This case is common for all organizations with commercial links to Walmart, La Colonia, Superselectos, and export markets (mainly Costa Rica and the United States).

Another case to highlight is the relationship between Arsagro and Zamorano. Arsagro is receiving training by the Zamorano research center to improve the characteristics of bean grains to develop greater resilience to climate variability.

Other results of the project's intervention:

- Regulation of market prices to improve sales conditions for producers and increasing their bargaining power vis-à-vis intermediaries.
- Sustainability of the measures implemented: development of environmental capacities to access markets that are more demanding.
- More importance is given to obtaining environmental or sanitary licenses to support the operation of organizations.
- Raised awareness of the corporate and environmental responsibility of organizations.

[3] HORTISA, PROVIASA, La Meseta, Tropical Yojoa, ECARAI, APROLHF, Vegetales Lencas y VERYFRUP

- **Small-scale infrastructure**

Environmental considerations for the installation of signage, RFID technology, and curved roofs in El Salvador were taken into account from the design phase, which allowed binding clauses to be incorporated in the requests for proposals (RFPs) and Purchase Orders with selected suppliers in order to ensure the quality and sustainability of civil works.

RTMA assisted DGA with the application for permits from the Ministry of Public Works and the Ministry of the Environment to construct curved roofs, and informed the local municipalities of Pasaquina and San Francisco Menendez of the implementation of this activity in primary areas.

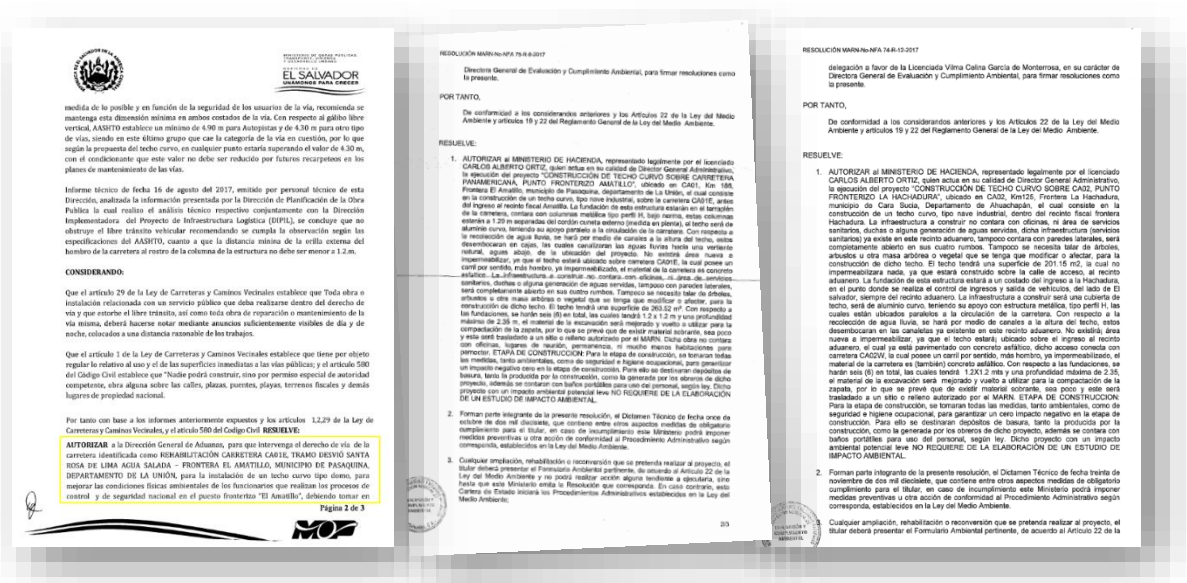


FIGURE 10. MOP AND MARN'S APPROVAL TO BUILD THE CURVE ROOFS AT EL AMATILLO AND LA HACHADURA BORDER

The conditions set forth in these approvals were taken into account to define the location of the structures, review the construction site readiness plan, and define the design of the curved roofs.

In addition, RTMA hired the laboratory "Suelos y Materiales S.A. de C.V." for soil sampling and analysis to define the treatment required in the construction area and the structure's burden support system (# of pedestals, footings, tensioners, etc.) to ensure the stability of the structure. The project carried out several field visits with the supplier and DGA in order to define and approve the perimeter of the work, and to identify pipes, cabling and infrastructure that could be affected by the work. During the design phase, options such as the construction of rainwater reservoirs were ruled out because DGA does not have the resources to maintain these types of structures, which could create an environment conducive to mosquitoes or other vectors.

DGA authorized the project to carry out the work on a specific schedule of off-peak hours to minimize the interruption of traffic since it required partially closing the roads at the border. RTMA ensured that subcontracted personnel carefully marked the work areas and that personnel used adequate equipment and tools to carry out the electrical work.

FIGURE 11. INSTALLATION OF CLEAN ENERGY LAMPS AT LA HACHDURA CEILING ROOF; DELIMITATION OF THE WORK AREAS

Following the instructions of the soil analysis, the soil treatment was carried out in the intervention areas of La Hachadura and El Amatillo. The supplier was required to submit laboratory analyses to verify the properties of the materials and mixtures used to restore the construction site. Due to the roofs' steep slopes, containing walls were installed to prevent erosion in the El Amatillo construction area.

FIGURE 12. CONTANING WALL AT EL AMATILLO'S CURVE CEILING

After construction was completed, the waste was properly disposed at the Santa Rosa de Lima and San Salvador's landfills. As part of the close-out of the activity, the project conducted a meeting with DGA's architect, Cesar Aguilar, and the legal representative of the subcontractor, Suministros y Proyectos, to prepare and submit maintenance guidelines to DGA, as well as terms of warranty. (See Figure 14.)

FIGURE 13. MANUAL OF MANTEINANCE RFID

As for the implementation of RFID technology, the project obtained the respective permits from DGA to install five RFID reading points (i.e. arcs) in El Salvador, from SAT to install a point in Guatemala, and from DARA to install a point in Honduras. The project obtained approval for the use of the radio-electric spectrum from the Superintendence of Telecommunications of Guatemala (SIT), and from General Superintendence of Electricity and Telecommunications (SIGET) in El Salvador, although the latter has yet to issue an official statement.

Both the infrastructure and technology contracts issued by RTMA included environmental clauses, which allowed the project to ensure compliance with basic occupational safety and environmental management standards. Operators used appropriate protective equipment and tools, and properly demarcated the intervention areas. The intervention area was restored and the waste was disposed of in an authorized landfill. No complaints were received from the community or customs regarding noise, dust or other issues.

FIGURE 14. COMPLIANCE OF INDUSTRIAL SECURITY STANDARDS.

Mejores prácticas para gestionar Baterías de litio que han terminado su vida útil

Existen y están en incremento problemas ambientales de carácter internacional, que requieren una acción colectiva. Estos problemas se originan en la interdependencia entre los países por el uso de recursos naturales de interés común fronterizos, las externalidades transfronterizas, las complejas vinculaciones intersectoriales (entre el medio ambiente y el comercio internacional, el incremento del consumo de combustibles fósiles, etc.) y la existencia de fenómenos de ubicación local pero de carácter universal.

Para el control de los movimientos transfronterizos de desechos peligroso y su eliminación a nivel mundial, surgió el Convenio firmado en Basilea, Suiza, en marzo de 1989, ratificado por El Salvador el 5 de abril de 1991.

En base al diagnóstico realizado por el Ministerio de Medio Ambiente y Recursos Naturales (MARN), presentado en el reporte "Manejo Ambientalmente Adecuado Acido-Plomo usadas en Centroamérica y El Caribe", se tiene que en El Salvador, no existe una regulación exclusiva para el transporte y manejo de pilas y baterías

En el Marco Legal de la Ley del Medio Ambiente, en el *Capítulo V*, titulado: ***Riesgos Ambientales y Materiales Peligrosos***, en los *artículos 58 y 60*, se hace referencia al manejo, transporte, almacenamiento y disposición final de los desechos peligrosos. A continuación, se detallan los artículos 58 y 60 extraídos de la Ley del Medio Ambiente.

LEY DE MEDIO AMBIENTE. DIARIO OFICIAL República de El Salvador, América Central TOMO No. 339, NUMERO 79, San Salvador Lunes 4 de Mayo de 1998 (ANEXO I)
Desechos Peligrosos
Art. 58: El Ministerio, en coordinación con los Ministerios de Salud Pública y Asistencia Social, Economía y las municipalidades, de acuerdo a las leyes pertinentes y reglamentos de los mismos, regulará el manejo, almacenamiento y disposición final de desechos peligrosos producidos en el país.
Contaminación por sustancias, residuos y desechos peligrosos
Art. 60: Toda persona natural o jurídica que use, genere, recolecte, almacene, reutilice, recicle, comercialice, transporte, haga tratamiento o disposición final de sustancias, residuos

FIGURE 15. GUIDELINES TO DISPOSE LITHIUM BATTERIES

As part of the activity's closing documents, the project will provide DGA with an instruction manual for the safe disposal of lithium batteries used by the mobile devices (donated by the project), and information on how to establish an agreement with authorized recycling companies.

Similarly, the installation of the signage was approved by the customs administrator of La Hachadura as it was installed inside the premises. The design of signage was based on the standards established in the Central American Manual of Uniform Traffic Control Devices. The installation took place on a Sunday to avoid interrupting operations at the border. The project supervised that all waste was properly disposed of, and that the intervention areas were completely restored. Since no horizontal marking was done, there were no problems with spillage of paint or disposal of paint cans.

Figure 16. SIGNAGE INSTALLED AT LA HACHADURA CUSTOMS FACILITIES

The supplier provided customs with a brief guide to ensure that the signage is kept in good condition.

Results of the project intervention:

- Improvement of labor conditions for border control staff
- Reduction of occupational health risks related to long hours of sun exposure
- Improvement of logistics management, which lead to a reduction of car accidents within the Customs' facilities.
- Empowerment of DGA to adopt and manage infrastructure and systems implemented by the RTMA project.

Challenges

- Customs must allocate enough financial and human resources to provide regular maintenance of infrastructure and equipment.

4.0 EMMR TABLE FOR POST-HARVEST AGRICULTURAL PRODUCTION ACTIVITIES

From Development of the Solicitation Request for the Grants Fund in January 2014 through Project Close Out in April 2018

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
Safety hazards to workers and public during construction of installations	Place hazard signs and close off area to public during installation of equipment. Workers are equipped with Personal Protective Equipment	**Number of New equipment installation, compliance with Industrial Safety Measures** 59 major machinery installed in 22 organizations. All Vendors complied industrial safety measures; 0 labor accidents reported during installation of machinery. **Status:** fulfilled	N/A	N/A
Lack of Construction waste disposal can cause pollution	All construction waste is disposed of on a daily basis in a designated landfill approved by the Mayor	**Number of Equipment Installations with waste disposed correctly:** Construction required to install major machinery was minimal or not required, the waste was disposed correctly by vendors. 59 major machinery installed in 22 organizations. **No waste visible at the end of each day** 0 complaints reported by the organizations or surrounding community related to waste disposal. **Status:** fulfilled	N/A	N/A
Pesticides spills can cause ground pollution. Pesticide use can cause hazards to human health. Unwashed pesticide containers can cause human health issues and pollution if not properly washed and disposed of.	A PERSUAP must be prepared for the pesticides used in equipment donated by the project prior to any use of fumigation equipment USAID approved, and followed (to include all pesticides specific to crops) to prevent human health issues and pollution.	**Number of PERSUAPs produced and shared with beneficiaries.** 1 Amendment to PERSUAP for Better Coffee Harvest Project produced and shared with beneficiaries. **Status:** fulfilled	N/A	M&E Specialist and Local Technical Partner, FUSADES, shared the PERSUAP with the general manager and the Head of Production Planning. The mitigation measures were presented to Acopasca's associates during the training session on Safer Use of Pesticides.
Processing using soaps and pesticides cause water pollution that can get absorbed into soils and aquifer	Follow the PERSUAP directions if pesticides are Used to avoid placing pesticides directly into the water.	**Number of organizations following PERSUAP directions.** The PERSUAP was made to regulate Acopasca's operations. The company is following PERSUAP directions. **Only PERSUAP approved pesticides used** **Status:** fulfilled		Main clients of the organization, such as Chiquita Brands, require a mix of the approved pesticides to be applied to the final product. Acopasca can face commercial penalties if additional pesticides are identified in the mix.
Processing using soaps and pesticides cause water pollution that can get absorbed into soils and aquifer	Monitor how water is being utilized and how it is disposed and provide guidelines to improve use of water.	**Water management good practices shared to beneficiaries and being implemented.**	The organizations do not have financial or technical resources to perform a well gauging. The project taught them to make an	The recommendations were made for 8 organizations with potential to improve its water management.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
		RTMA shared about 11 good practices related to measuring of the well capacity, water consumption, rainwater harvesting, and mud trap construction[1]. **Status:** Outstanding	estimation based on the total capacity of the well and number of times the well must be filled per day. However the project verified that the organizations have not been consistent by keeping a log of the water consumed. To build specific infrastructure for water reservoirs or rainwater collection and use is costly due to space constraints in the organizations' facilities.	Acopasca, ECARAI, La Meseta have implemented the mitigation activities that apply to their production process. None of the organizations have reached a critical level of water shortages. None of the organizations have received a complaint related to conflicts of water consumption. Water supply systems are endorsed by the local community or respective municipal authorities. COMECSA and La Meseta reuse the water left over from the washing process for irrigation of crops. The water is innocuous since no chemicals are applied in the washing step.
Use of springs can decrease in ground water, water available for community use, and social conflicts on water use May decrease availability of water supply for other uses in the community.	Organizations take measures needed to obtain a "Non Affectation Letter" from local authorities. Consider capacity of the community to build a water storage tank for water dedicated to this process.	**Letter of non-affectation obtained** **Status:** Fulfilled		The organization Acopasca obtained the letter of non-affection for the use of the well in the community. Therefore, there appears to be no conflict regarding water use for community and production plant activities. Despite this, Acopasca has obtained financial support by FOMILENIO II to build an exclusive well for productive activities.
Use of springs can decrease in ground water, water available for community use, and social conflicts on water use May decrease availability of water supply for other uses in the community.	Consider if additional systems or equipment are required in order to reuse water e.g. filtration system, pump system.	Report on suitable additional systems or equipment. New efficient water systems for recycling are being used. Water use diminished **Status:** Outstanding	Most of the organizations don't recycle water due to limitations of the facilities.	Meseta has a system to filter, pump and redistribute sewage water for carrot crops surrounding the production plant. This organization also has rainwater reservoirs that help them to reduce harvesting variability in draught seasons. Donation of machinery has allowed for the use of water per hundredweight be more efficient. However, since production capacity has increased, organizations are consuming more water than when the processes were non-existent or handcrafted. Installation of machinery has had a positive impact on reduction of pollution by hydric sources. For instance, Meseta

1 1) ACOPASCA must make a well for the exclusive use of the cooperative with all the permits in order, since the well they are using is also for domestic use for the community; 2) Finalize the permit for the use of the water coming from the well for agricultural purposes with ANDA (National Administration of Aqueducts and Sewers); 3) Implement rainwater harvesting, taking advantage of the roof of the Association's banana processing plant; 4) Provide maintenance to the pits located in the banana processing plant; 5) Carry out well gauging to determine the amount of water available to the Company; 5) Place gutters on the Company's large roof to take advantage of rainwater; 6) Conduct a sampling (laboratory) of the quality of water used by producers on their plots; 6) Construction of a pit for the discharge of water from carrot washing; 6) Construction of a water reservoir; 7) Construction of mud traps; 8) Reuse of mud on the members' premises.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
		Status: Outstanding		used to wash carrots directly in the lagoon of the community.
New equipment purchased may use oil, diesel or other fuel. Risk polluting the environment if fuel is not disposed of safely or recycled.	Consider whether used fuel can be utilized in any other agricultural equipment. Below equipment, place material that can absorb any oils/fuels that may spill and dispose of in a lined deposit.	Report on how fuel can be used and recycled by specific grantee. No oil spills observed **Status:** Fulfilled		Most of the machinery is powered by electrical source. No oil spills were observed during site visits.
Use of new machinery could cause serious injury if used incorrectly	Organize occupational hazard and equipment safety training.	Before and after testing to evaluate participants' knowledge. May want to test again after a couple of months to test knowledge retention. Consider whether annual training and testing with certification is necessary **Status:** Partially fulfilled	Some of the organizations have implemented a procedure of industrial security (ECARAI, Arsago, La Campesina, Acopasca, Honey producers). However, it is still necessary to foster the implementation of a training program on a regular basis to create awareness of the importance of industrial security. Organizations as La Meseta have a very limited compliance of industrial security protocols.	Clients such as Walmart conduct inspections on a monthly basis to ensure compliance of GAP and GMP, which include existence and compliance of an industrial security protocol. Non-compliance can lead to commercial fines. Project has trained organizations on industrial security, provided them equipment of personal protection, and produced guidelines customized for each organization on industrial security. Head of plant production in Acopasca, ECARAI and Arsagro supervise that all employees adhere to Industrial security regulations.
Use of new machinery could increase noise levels	When assessing solutions to improve post-harvest production take into consideration the proximity of the production area to the local population and other land uses. Install noise barrier if noise level can cause damage to communities. Provide protective equipment to operators of the machine.	Report on local land uses in proximity to production area and potential noise impact on these communities No complaints from neighbors regarding noise or odors. Measures taken to manage noise; high-level barriers in place. Workers equipped with earplugs. **Status:** Fulfilled	N/A	Only bean classification machinery produce a considerable noise. Arsagro Asoprano and Cecoopsemein demand their employees and visitants to use earplugs. Due to location of the facilities, no disturbance is caused to surrounding areas.
Disposition of waste	Implement a protocol of cleaning and correct disposition of waste after every production cycle	No waste after a production cycle Reuse of organic waste **Status:** Fulfilled	N/A	As general rule, the organizations clean installation the same or next day to be prepared for next cycle of production. Three alternatives have been identified: 1) waste disposition in municipal landfill; 2) used of subproducts –carrot residues- not contaminated by chemicals used to feed domestic animals, and 3) produce compost for soil fertilization or worm farming.
Operations of processing and equipment use	Each processing plant shall have a maintenance plan and training of staff shall be completed to implement the maintenance plan.	Plan for maintenance **Status:** Fulfilled	N/A	Organizations received guidance from vendors to use and provide maintenance to the machines.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks

4.1 SUAP

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
ACOPASCA and administrative project personnel are not familiar with the EPA risk classification information Phase I of the Project is finalized. Training should have been provided and a PERSUAP carried out during this phase Workers at the ACOPASCA plant are unaware of the risks to which they are exposed if they do not use PPE	ACOPASCA personnel must be trained in the use of EPA classification tables. It is important as the EPA's active ingredient classifications are continually reviewed. The project should train ACOPASCA on the PERSUAP for this cooperative. ACOPASCA should develop a capacity-building plan on pesticide safe use related issues. Develop a Safe Use of Pesticides training Program to train trainers in procedures that comply with Global GAP	**All the ACOPASCA plant personnel have been trained on EPA pesticide information and classification** **Status:** fulfilled	N/A	Under the training on GAP and GMP provided by Fusades to Acopasca, the project conducted a training on safer use of pesticides. 33 personnel were trained in a five session training. Post-harvest manager has been designated to ensure compliance of PERSUAP in ACOPASCA's cooperative. Executive board is in charge of ensuring compliance of GAP (Fusades continues providing technical assistance on GAP and GMP to Acopasca).
The location of the tank with the mixture is located where people circulate, therefore, ACOPASCA workers and members are exposed to a potential	Change the place where the mixture tank is located to a safe place with a fence and a door with a lock, so the only person who will have access will be the person responsible for preparing the mixture. Always have available sand for spills, which should be kept in a place where all ACOPASCA personnel have access	Mixture tank located in a safe place **Status:** fulfilled	N/A	Mixture tank is already relocated according to PERSUAP instructions.
ACOPASCA workers and members do not comply with the use of PPE	Create awareness among producers on the risk of not using PPE on human health in the medium and long term	All the ACOPASCA plant personnel have been trained on the use of PPE and health impacts. All ACOPASCA personnel directly exposed to the use and manipulation of pesticides and the fumigation chamber using the appropriate PPE. **Status:** fulfilled	The equipment is only used for harvest and post-harvest activities directly related to cooperative's production. ACOPASCA's personnel are not using PPE when they work in their private/domestic harvests.	During grant program, the project invested 1,840.00 USD in PPE for ACOPASCA staff. Use of PPE is mandatory and compliance is controlled by the General manager of ACOPASCA.
ACOPASCA workers and members do not comply with the use of PPE	Develop a protocol on the use of PPE of the cooperative, and establish it as a labor standard. Seek other alternatives for PPE, in terms of the PPE material, once the useful life of the PPE has expired. Seeking lighter material and adapted to weather condition of El Salvador.	General manager has mandated the use of PPE in ACOPASCA's plant. The project delivered a Guideline on industrial security to be implemented in the cooperative. **Status:** fulfilled	Use of PPE continues to be a challenge due to the high temperatures in the working area.	Purchase coordinator has included this recommendation at the moment of purchasing new EPP.
Workers at the ACOPASCA plant are unaware of the risks to which they are exposed if they do not use PPE	Develop a monitoring plan to keep a record and control on the safe use of PPE in the ACOPASCA plant	safe use of PPE in the ACOPASCA plant	N/A	Daily by post-harvest manager, FUSADES agricultural specialist, and Head of plant production. According to general manager's instructions, employees can be penalized if the PPE is not properly used.
There is a problem with the design or maintenance of the pits, since the level of the water at the time of the visit coincides with the summer season,	Verify with a civil engineer that the sewage capacity of the pit coincides with the capacity of the plantain washing tank. The amount of water used should be included in the highest	Pits adjusted for required capacity. Water not accumulated in plantain washing zones and pits.	SOW defined to hire a civil engineer to provide technical assistance to ACOPASCA on this matter.	

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
only a few centimeters from its overflow level. There is a potential risk of water spillage in the winter season. It is important to mention that the pit will receive water from the washing tank and the fumigation chambers where pesticides will be applied	production peaks, estimating 10% more use of water	**Status:** Outstanding		
The effectiveness will be determined by the monitoring that will be conducted jointly with the buyer. The pesticides may have less effectiveness over time so it is important to comply with the recommendations in the product (label) and apply the recommended dose	The project will train ACOPASCA officials, plant workers, and partners on the importance of following all instructions on the use and dosage on the labels and pamphlets of the pesticides that come in each product requested and used Create a strategic alliance with the buyer (Chiquita), or the local technical partner, FUSADES, in order for them to provide advice on the pesticides recommended for purchase and export.	All ACOPASCA plant personnel have been trained on the importance of following all instructions on the use and dosage of pesticide labels and pamphlets, **Status:** fulfilled	N/A	A training plan has been implemented on safer use of pesticides, including PERSUAP. Clients conduct regular audits to ensure ACOPASCA is not using forbidden pesticides. Any non-compliance has commercial penalties.
ACOPASCA is not familiar with the database of pesticides registered in the MAG	The Project and ACOPASCA must ensure that the pesticides used in the fumigation chamber are registered in the MAG. MAG's table of approved pesticides purchased, shared and explained to Acopasca representatives.	MAG's table of approved pesticides purchased, shared and explained to Acopasca representatives. ACOPASCA must purchase the MAG's pesticide database and updates when they are expanded. **Status:** fulfilled	N/A	ACOPASCA has acquired El Salvador's Official Register of Approved Pesticides for their employees. The ACOPASCA procurement coordinator is expected to consult these materials throughout the purchasing process.
Potential conflict due to the use of water: currently the water used by ACOPASCA comes from a well that also supplies the San Rafael community. Domestic and agro-commercial use can cause problems in the future. The well already has a depth of 37 meters when the initial depth was 65 meters. It is important to mention that ACOPASCA has a permit from ANDA (National Administration of Aqueducts and Sewerage), and the well has been part of the Association for Community Development	Construction of a water reservoir with relevant studies. Construction of a well owned by ACOPASCA in order to use this water for agro-commercial purposes.	Design and feasibility study for construction of own well. **Status:** fulfilled	N/A	FOMILENIO II approved to fund the construction of the ACOPASCA's well. Construction is expected to start next year.
Workers at the ACOPASCA plant are unaware of the risks to which they are exposed if they do not use PPE	Develop a monitoring plan to keep a record and control on the safe use of PPE in the ACOPASCA plant	safe use of PPE in the ACOPASCA plant **Status:** fulfilled	N/A	Daily by post-harvest manager, FUSADES agricultural specialist, and Head of plant production. According to general manager's instructions, employees can be penalized if the PPE is not properly used.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
Workers at the ACOPASCA plant are unaware of the risks to which they are exposed if they do not use PPE	The training for plant personnel on safe use of pesticides will be implemented through the learning-by-doing methodology in order to have a visual memory on the subject.	Safe use of PPE in the ACOPASCA plant **Status:** fulfilled	N/A	FUSADES specialist accompanied the cooperative during the first uses of the fumigation chamber.

4.2. SMALL –SCALE INFRASTRUCTURE

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
CANOPIES				
If structures are incorrectly designed they may pose a safety threat to those working under them and may not be able to withstand adverse weather or heavy passage of traffic in the surrounding area.	Small scale construction must adhere to national construction standards.	Recognized national construction standards being used in design and construction. **Status:** fulfilled	N/A	Design of canopies was validated with DGA's civil engineer, and DGA's Operations Director. Design of structure was based on environmental conditions of each border. Civil engineer from RTMA and DGA supervised the project to ensure compliance of national standards. Project followed recommendations provided by the Ministry of Public Civil Works.
	Design needs to be reviewed and approved by a certified engineer, and a USAID engineer if over $500,000.	Approval from USAID **Status:** N/A	N/A	PO below 500,000
	Conduct relevant, recommended analyses such as soil/foundation composition tests.	Industry recognized tests conducted **Status:** fulfilled	N/A	Soil analysis conducted at the two borders, recommendation included in RFP and duly implemented.
	Verify electricity sources if canopies are to include lighting.	Source and strength of electricity supply identified and being used. Solar panels for lighting used where possible. **Status:** fulfilled	N/A	The project coordinated with USAID's Regional Clean Energy Initiative to include lamps powered by solar energy inside the canopy.
	Vendor to update this Programmatic EMMP to add site specific conditions that may be missing from this EMMP. Prepare a Quality Assurance Plan	Updated EMMP that includes site specific conditions and mitigation measures implemented. **Status:** fulfilled	N/A	Monitoring was conducted in a weekly basis. EMMP was updated by RTMA's supervisors.
Drilling into the ground and creating concrete support foundations will disturb the ground cover. Dust and Noise during construction can disturb custom border officials and public	Ensure that any necessary local planning permits have been obtained.	Planning permits in place before construction starts **Status:** fulfilled	N/A	Permits from DGA, Minister of Public Works, Minister of Environment and local municipalities were obtained.
	International standards and Best Management Practices used in design and construction.	Number of International standards and Best Management Practices used in design and construction. **Status:** fulfilled	N/A	Included in the RFP and implemented.
	Secure construction site with "danger" tape and guards for public security.	Measures taken to ensure public security **Status:** fulfilled	N/A	All intervention zones were properly marked.
	Keep dirt in the area of construction wet during construction to minimize dust.	No dust or complaints from public/custom workers **Status:** fulfilled	N/A	No dust or complaints from public/custom workers
	Implement construction during off peak hours to minimize noise disturbance.	Construction done in off peak hours and no complaints received regarding noise. **Status:** fulfilled	N/A	Programed of activities according to schedule authorized by Customs.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
Failure to remove construction waste causes damage to the local environment.	Ensure there is a clause in the subcontractor contract to clean-up construction waste after installation and waste is disposed of in an approved landfill.	Site free of construction waste. Waste deposited in landfill approved by the municipalities **Status:** fulfilled	N/A	Deposition of waste in Santa Rosa de Lima (construction at El Amatillo) and San Salvador's landfills (construction at La Hachadura).
Ensure structures are well maintained.	Conduct physical reviews of the structures on an annual basis. Maintenance plan prepared and staff trained for maintenance	Standard construction wear and tear tests Maintenance plan being implemented **Status:** fulfilled	N/A	Manual delivered to DGA.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
INSTALLATION OF TECHNOLOGY BY RADIOFRECUENCY				
Drilling into the ground and creating concrete support foundations will disturb the ground cover at the various border sites. Designs may not be built to national and international standards	Vendor required to review the existing EMMP to ensure all actions are listed and implement EMMP mitigation measures.	EMMP updated Environmental mitigations included in contract **Status:** fulfilled	N/A	Design of canopies was validated with DGA's civil engineer, and DGA's Operations Director. Design of structure was based on environmental conditions of each border. Civil engineer form RTMA and DGA supervised the project to ensure compliance of national standards. Project followed recommendations provided by the Ministry of Public Civil Works.
	Close of area of construction with "danger" tape and patrol the area to ensure public safety. The area will be restored to its previous condition. Vendor will haul the spoils away to an approved disposal site. Use soil erosion curtains around the construction site if the slope is more than 5%.	Number of measure taken to ensure public safety **Status:** N/A	N/A	PO below 500,000
	Indicate specific locations and measurements for drilling.	Utilize maps showing under-ground cables. Conduct site visits. Nathan and Vendor should work closely with the Infrastructure Representative from Customs **Status:** fulfilled	N/A	DGA did not have underground cables, however drilling was conducted with supervision of DGA's vendor, JMTelcom, and a representative from DGA.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
Drilling into the ground and creating concrete support foundations will disturb the ground cover at the various border sites. Designs may not be built to national and international standards	Ensure that any necessary local planning permits have been obtained before any installation begins Designs meet national codes and standards Installation of poles, arches and other equipment should be conducted safely and in a manner that ensures long term stability i.e. complying with international trucking standards, withstanding adverse weather and heavy passage of traffic in the surrounding area	Obtain copies of planning permits. **Status:** fulfilled	N/A	Regional customs approved the design of the RFID system to be installed at the borders. Design of the arches were made to support environmental conditions of the borders. Signage and barriers were installed to be made visible and protect the arches for truck drivers.
	Construction designs approved by a USAID engineer if cost of project is over $500,000.	Approval from USAID **Status:** N/A	N/A	N/A
	Small scale construction must adhere to international construction standards and have a Quality Assurance Plan	Arches adhere to the international standard of 6m from ground to top of arch. **Status:** fulfilled	N/A	Due to local regulations, the height defined was 5m from ground to top of arch.
	At construction site, ensure soil area is moist to minimize dust.	No dust and no complaints received **Status:** fulfilled	N/A	No dust or complaints from public/custom workers
	Construct during off peak hours to minimize noise.	Construction done on off peak hours and no complaints received **Status:** fulfilled		Programed activities according to schedule authorized by Customs.
Disposal of lithium batteries after useful life (approx. 2 years)	Make set up of a contract with a hazardous waste disposal company a requirement in the USAID property transfer papers that Customs will sign to take ownership of the RFID system.	No. of batteries disposed. **Status:** fulfilled	No need of dispose batteries as of the date.	Guidelines provided to DGA to dispose this type of waste safely. Three approved companies in charge of lithium battery disposal identified and the contact info has been included in the manual.
More efficient border crossing procedures will reduce the exposure of those crossing the border to the local informal economy. Those currently working and living in this economy will have to seek other sources of income.	Conduct a social and economic impact analysis over a sustained period of system use, beginning before the system is operational. Deliver results to the Government of El Salvador (GoES).	Number of businesses, population, Occupied housing. **Status:** fulfilled	N/A	An Economic Impact Assessment was conducted to identify impact of modernization measures on local community. Informal customs brokers could potentially result affected by implementation of these measures (as well as customs union). The assessment offers some alternative for affected population. The assessment was shared with national authorities.
Maintenance of the infrastructure	Maintenance plan shall be prepared and people trained on doing maintenance per plan.	**Status:** Partially fulfilled		RTMA, with support of the Regional Trade Facilitation Expansion Mechanism, acquired a one-year warranty and technical support for Regional Customs. The project will submit technical manuals to ensure maintenance of the equipment and infrastructure.

Description of Environmental Effect	Mitigation Activity	Status of Mitigation Measures	Outstanding Issues Relating to Required Conditions	Remarks
SIGNAGE				
Drilling into the ground and creating concrete support foundations will disturb the ground cover or preexisting roads/pavements. Installation of signage and poles, arches and other equipment should be conducted safely and in a manner that ensures long term stability i.e. withstanding adverse weather and heavy passage of traffic in the surrounding area Use of paint for painting roads will have waste that can be dangerous (left over paint and paint cans)	Ask vendor to complete an update of this EMMP to include site-specific conditions, actions, and mitigation measures needed. Ensure that any necessary local planning permits have been obtained. Construction must adhere to national road signage standards. Paint when not windy to avoid paint sprays. Paint cans stored in a locked area and Dispose of paint cans after use in an official hazardous landfill.	Completed EMMP with updated actions and mitigation measures Obtain copies of planning permits. No complaints of paint spray. No empty paint cans observed at site after work was completed. Signs adhere to national road signage standards **Status:** fulfilled	N/A	Permits obtained from DGA. Design of signage according to Central American regulations. No paint required.
Disruption of local informal economy may lead to displacement of people and businesses.	Conduct a social and economic impact analysis over a sustained period of system use, beginning before the system is operational. Deliver results to the Government of El Salvador.	Number of businesses population occupied housing **Status:** fulfilled	N/A	An Economic Impact Assessment was conducted to identify impact of modernization measures on local community. Informal customs brokers could potentially result affected by implementation of these measures (as well as customs union). The assessment offers some alternative for affected population. The assessment was shared with national authorities.
Lack of maintenance will lead to a loss of investment and possible lack of organization at the border if signs are destroyed or missing and paint is not repainted frequently	Conduct physical reviews of the structures on an annual basis. Maintenance Plan prepared and staff trained to implement plan. Maintenance Plan shall include at a minimum: training, equipment needed for maintenance, and maintenance schedule and budget.	Maintenance plan prepared and custom maintenance workers trained **Status:** fulfilled	N/A	The project delivered guidance to La Hachadura Customs Manager on how to provide equipment maintenance. This activity has been included in the responsibilities of DGA's maintenance team.

1.0 ATTACHMENTS

5.1. Preliminary evaluation of the selected organizations

Formulario de Evaluación Ambiental CONSORCIO

(marque con X)

Nombre de la Actividad	Empaque y comercializacion de granos básicos	SI	No	Si la respuesta es positiva, ¿implica riesgo alto o medio?	
Tipo de actividad					
Beneficiario	HORTISA, PROVIASA, LA MESETA, VEGETALES LENCAS, TROPICAL YOJOA, VERYFRUP, ISEN			Alto Riesgo	Riesgo nivel medio
Fecha	ago-14				
Impacto en Recursos Naturales y Lugares Aledaños					
¿El proyecto implicará el uso de compuestos químicos como los pesticidas herbicidas, pinturas, barnices, productos a base de plomo, etc.; o va a implicar planes para utilizar dichos compuestos o entrenamiento en el uso de estos compuestos?			x		
¿Involucra la disposición de aceite usado de motores?			x		
¿Hay zonas terrestres o acuáticas potencialmente sensibles cerca del sitio del proyecto, incluyendo las áreas protegidas?			x		
¿Las actividades propuestas generan gases en el aire, líquidos o sólidos (es decir, descargas de sustancias contaminantes)?			x		
¿La actividad resultará en una disminución de la cubierta forestal?			x		
¿Es la actividad incompatible con el uso actual del suelo en las áreas aledañas?			x		
¿La actividad afectará características geológicas y físicas únicas o especiales?			x		
¿Afectará la actividad a los manglares y los arrecifes de coral?			x		
¿Contribuirá la actividad a la reducción sustancial en la cantidad de agua subterránea o de cualquier manera disponible para los suministros públicos de agua?			x		
¿La actividad violará las normas de aire?			x		
Medio Ambiente y Salud					
¿Las actividades del proyecto crearán condiciones que aumenten las enfermedades, transmitidas por el agua o por vectores, a la población?			x		
¿Para la rehabilitación de vías, así como subvenciones de agua y saneamiento, se ha presentado un plan de mantenimiento?			X		
¿La actividad generará riesgos o barreras para peatones, automovilistas, o personas con discapacidad?			x		
¿La actividad aumentará los niveles de ruido existentes?			x		
¿El proyecto implicará la eliminación de jeringas, gasas, guantes y otros desechos médicos de riesgo biológico?			x		
¿Es la actividad incompatible con el uso del suelo existente?			x		
Permisos Locales de Planificación					
Genero					
¿Los hombres y las mujeres se benefician de forma desproporcionada o están implicados de manera desigual en las actividades del proyecto?			x		
¿La actividad del proyecto inhibe la participación equitativa de hombres y mujeres?			x		
¿Existen factores que impiden la participación de las mujeres en el proyecto?			x		

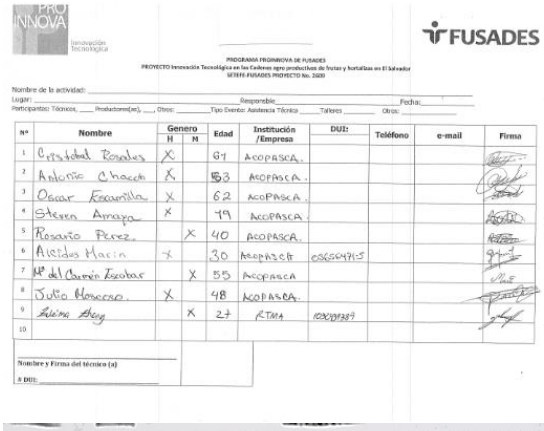
ACCIONES RECOMENDADAS (Escoja la más apropiada)	
a. No EMPR requerido. El proyecto no tiene potencial de producir efectos adversos importantes. No requiere revisión ambiental más a fondo (Exclusión Categórica). No se requiere EMPR.	x
b. El proyecto tiene el potencial de efectos ambientales adversos de mínimos a moderados, pero mitigables. Medidas para mitigar los efectos ambientales se incorporarán (Determinación Negativa con Condiciones). EMPR requeridos.	
c. El proyecto tiene efectos ambientales adversos potencialmente importantes o significativos, pero requiere más análisis para llegar a una conclusión. Una evaluación ambiental será preparada (Comprobación positiva). No se requiere EMPR.	
d. El proyecto tiene efectos ambientales adversos potencialmente importantes, y las revisiones del diseño del proyecto o la ubicación o el desarrollo de nuevas alternativas es requerido (aplazamiento).	
e. El proyecto tiene efectos ambientales adversos sustanciales y no susceptibles de mitigación efectiva. La mitigación es insuficiente para eliminar estos efectos y las alternativas no son factibles. El proyecto no está recomendado para su financiación.	

5.2. Training program on safer use of pesticides

PROGRAMACIÓN DE FORMACIÓN DE TRABAJADORES CON CONOCIMIENTOS DE PERSUAP BPA Y BPM EN ACOPASCA

PERÍODO: Septiembre, Octubre y Noviembre 2017

DIA/FECHA/HORA	LUGAR DE REALIZACION Y RESPONSABLE	ACTIVIDAD	RESULTADOS PROPUESTOS	PERFIL CAPACITANDOS
Miercoles13 de septiembre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias Coop. San Carlos. Ténico de Producción primaria Proinnova	Transferencia de conocimientos sobre BPA: Manejo seguro de plaguicidas y protección de la salud del agricultor. Colinesteraza en sangre.	Que los obreros agrícolas trabajando en las parcelas agrícolas de la cooperativa tengan conocimiento y se apropien del cuidado de la salud propia en las labores agrícolas y del medio ambiente	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles20 de septiembre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias Coop. San Carlos. Ténico de Producción primaria Proinnova	Transferencia de conocimientos sobre BPA: Manejo seguro de plaguicidas y protección de la salud del agricultor. Colinesteraza en sangre.	Que los obreros agrícolas trabajando en las parcelas agrícolas de la cooperativa tengan conocimiento y se apropien del cuidado de la salud propia en las labores agrícolas y del medio ambiente	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles 27 de septiembre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias Coop. San Carlos. Ténico de Producción primaria Proinnova	Transferencia de conocimientos sobre BPA: Triple lavado. Salud ocupacional. Contaminaciones y Emergencias	Que los obreros agrícolas trabajando en las parcelas agrícolas de la cooperativa tengan conocimiento y se apropien del cuidado de la salud propia en las labores agrícolas y del medio ambiente	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles 04 de octubre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias Coop. San Carlos. Ténico de Producción primaria Proinnova	Transferencia de conocimientos sobre BPA: Triple lavado. Salud ocupacional. Contaminaciones y Emergencias	Que los obreros agrícolas trabajando en las parcelas agrícolas de la cooperativa tengan conocimiento y se apropien del cuidado de la salud propia en las labores agrícolas y del medio ambiente	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles 13 de 0ctubre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias Coop. San Carlos	Transferencia de conocimientos sobre BPA: Normas de cosecha y post- cosecha. Restricción de uso de plaguicidas establecidas por la EPA. Inocuidad. Residuos en fruta (ppm). Reglamentación y uso de registros Global Gap en campo.	Que los obreros agrícolas trabajando en las parcelas agrícolas de la cooperativa tengan conocimiento y se apropien de las normas para lograr la inocuidad en lo producido y la reglamentacion existente	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles 20 de octubre de 2017 / 8.00 am- 10:00 am	Sala de conferencias y parcelas de cultivo de plátano en Coop. San Carlos	Se llevará a cabo una sesión de evaluación práctica por parte de los capacitandos sobre las actividades desarrollandose en las parcelas de producción de la cooperativa	Que los obreros agrícolas trabajando en las parcelas agrcolas de la cooperativa descubran como evaluar ellos misnmos las actividades desarrollandose en las actividades agrícolas	Asociados y/u obreros agrícolas trabajando en las parcelas agrícolas de Acopasca
Miercoles 27 de octubre de 2017 / 1:30 pm- 3:30 pm	Sala de conferencias en Coop. San Carlos	Se llevará a cabo una sesión de evaluación a los capacitandos. Se entregará un diploma de haber adquirido conocimientos sobre BPA	Que los obreros agrícolas trabajando en las parcelas agrícolas y los operarios trabajando en la planta de procesos se apropien de las BPA y las BPM	Asociados y/u obreros agrícolas trabajando en las parcelas agrcolas y/u los operarios trabajando en la planta de procesos de Acopasca

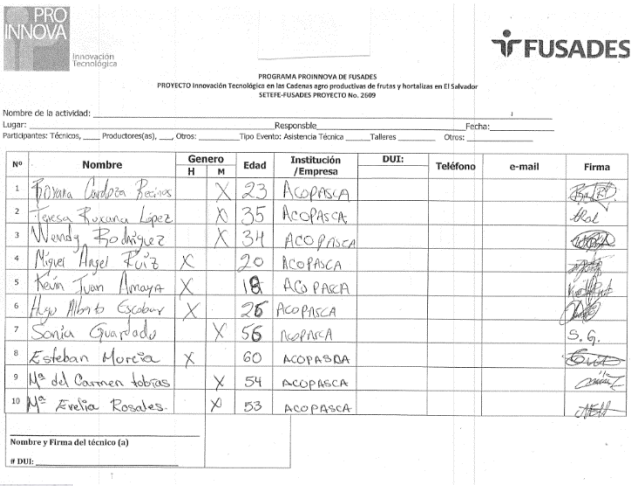


PROGRAMA PROINNOVA DE FUSADES
PROYECTO Innovación Tecnológica en las Cadenas agro productivas de frutas y hortalizas en El Salvador
SETEFE-FUSADES PROYECTO No. 2609

Nombre de la actividad: _____
Lugar: _____ Responsable: _____ Fecha: _____
Participantes: Técnicos, ____ Productores(as), ____, Otros: _____ Tipo Evento: Asistencia Técnica ____ Talleres _____ Otros: _____

Nº	Nombre	Genero H	Genero M	Edad	Institución /Empresa	DUI:	Teléfono	e-mail	Firma
1	Cristobal Rosales	X		61	ACOPASCA.				
2	Antonio Chacon	X		53	ACOPASCA.				
3	Oscar Recinella	X		62	ACOPASCA.				
4	Steven Amaya	X		49	ACOPASCA.				
5	Rosario Perez.		X	40	ACOPASCA.				
6	Alcides Marin	X		30	ACOPASCA	05655471-5			
7	Mª del Carmen Escobar		X	55	ACOPASCA				
8	Julio Moncera.	X		48	ACOPASCA.				
9	Edelma Abeg		X	27	RTMA	03709787			
10									

Nombre y Firma del técnico (a)
DUI: _____



PROGRAMA PROINNOVA DE FUSADES
PROYECTO Innovación Tecnológica en las Cadenas agro productivas de frutas y hortalizas en El Salvador
SETEFE-FUSADES PROYECTO No. 2609

Nombre de la actividad: _____
Lugar: _____ Responsble _____ Fecha: _____
Participantes: Técnicos, ____ Productores(as), ____, Otros: _____ Tipo Evento: Asistencia Técnica ____ Talleres _____ Otros: _____

Nº	Nombre	Genero H	Genero M	Edad	Institución /Empresa	DUI:	Teléfono	e-mail	Firma
1	Paloma Cardoza Recinos		X	23	ACOPASCA				
2	Teresa Roxana Lopez		X	35	ACOPASCA				
3	Wendy Rodriguez		X	34	ACOPASCA				
4	Miguel Angel Ruiz	X		20	ACOPASCA				
5	Kevin Juan Amaya	X		18	ACOPASCA				
6	Hugo Alonso Escobar	X		26	ACOPASCA				
7	Sonia Guardado		X	56	ACOPASCA				S.G.
8	Esteban Moreira	X		60	ACOPASCA				
9	Mª del Carmen Tobias		X	54	ACOPASCA				
10	Mª Evelia Rosales		X	53	ACOPASCA				

Nombre y Firma del técnico (a)
DUI: _____